# Thailand: Electronic Industry

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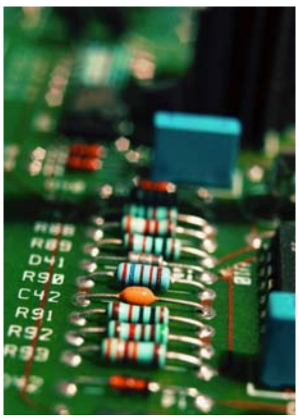
## Summary

In late 2005, Thailand gained recognition as the world's largest manufacturer of Hard Disk Drives (HDD), as it became a manufacturing location for the world's leading companies, including Seagate, Western Digital, Fujitsu, Hitachi Global Storage and Nidec. As such, Thailand needs to import nearly 90 percent of total electronics components value to the country every year. Thailand's Electrical and Electronics Institute (EEI) projected the electronics manufacturing production will increase by 10 – 15 percent in 2008 due to demand for Hard Disk Drives (HDD) and Integrated Circuit (IC) to supply the high-technology production of consumer products such as MP3, external disks, digital cameras, LCD TVs, DVD players, notebooks, personal computers and household appliances.




Regardless of global economic factors and the country's political instability, Thailand continues to move forward on restoring foreign investor confidence and stimulating the economy by collaborating with government agencies to support private investment projects in targeted industries, research centers and independent institutions in R&D activities. In 2007, with strong price competition, electronics manufacturers are required to seek new technologies and developments to enhance their competitiveness and give themselves an edge over their competitors. One technology, which has become the talk of the town recently, is Radio Frequency Identification or RFID. This technology will be used widely to order to increase productivity and reduce operation cost in various industries, for example, retailing, agribusiness, and logistics. In addition, automotive electronics is another sector that has a bright future; Thailand is one of the leading investment locations for auto parts and components production, particularly high-value auto electronics.

## Market Demand

The overall global demand of high-technology consumer products such as Hard Disk Drive (HDD) and Integrated Circuit (IC) is still high even though there has been an impact from the sub-prime mortgage problem, the rise of raw material and fuel cost, and the strengthening of the Baht. Nevertheless, this industry is not expected to suffer in the long-term. February 1, 2008 -The Semiconductor Industry Association (SIA) reported that global sales of semiconductors grew for the sixth-consecutive year, reaching a record $255.6 billion in 2007, an increase of 3.2 percent from the $247.7 billion reported in 2006. The major drivers are personal computer, mobile handsets, and consumer electronics.

- Personal Computers, which account for more than 40% of the electronic components market, grew by 13.8 percent and expected to grow by 12.2 percent in 2008.
- Mobile PC (PDA, Palm) has registered sales growth of 32.2 percent while desktop unit sales grew by 4.1 percent.
- Cell phone sales grew by 20 percent or around 1.2 million unites sales in 2007 and projected to grow 10 – 15 percent in 2008.
- MP3 player sales continue to grow at nearly 20 percent a year.
- LCD TV units grew by more than 50 percent, and digital camera units grew by 20 percent.

(*Source: JPMorgan*)

In Thailand, major electronic producers have diversified their production to the new emerging markets, which are India and China. Intel, the world biggest chip producer, has announced plans to produce a low cost chip in the emerging markets as well.

Hence, product trends in 2008 are the following:

- Semiconductor, IC: High-end Server and Notebook with extensive capacity processing.
- Semiconductor equipment: High-technology equipment such as Solar technology, Flash memory, and LCD Monitor. The demand for DRAM and NAND flash declined precipitously due to the average selling prices decreasing through the year
- Personal Computer, Notebook: High-end personal computer and notebook will be the major driver of the group that push sales growth by 10 percent due to the upgrading of Microsoft and Apple operating system.
- Primary storage, Hard disk: It is expected to have a strong sales growth due to the steep decline in prices, smaller, faster with huge space of storage. Also, the media data (video, audio) has bigger size, then, consumers are willing to upgrade their PC memory.
- Electronic Manufacturing Service (EMS): It is expected to grow gradually as long as the entrepreneurs can maintain their lower cost of production and provide one-stop shopping service.
- Communication Equipment, Switching Fast growth in the communication equipments market is expected as a result of strong competition between wireless and cable services. The telephone operators need to develop their narrowband networking of voice service to broadband networking of data, and change the circuit-switched to packetbase systems in order to serve the Triple play (voice, video, data) transmission in the near future.

(*source: SCIB Research*)

## Market Data

Having been the major electronic parts and components manufacturing base in Southeast Asia; Thailand's electronic production increased progressively to 28.29 percent since 2006. As a result of the global expansion of HDD and IC demand, electronic manufacturers have requested government support from the Thailand Board of Investment (BOI) in expanding production capacity of HDD, PCBA, Integrated Circuit, and Electronic components. The Thai Electrical and Electronics Institute (EEI) projected expansion of electronic production will increase by 10 – 15 percent in 2008. Even though, 4 CRT TV manufacturers have closed down their operations since late 2006 due to a shift in the demand of the CRT TV market toward LCD/Plasma TV or OLED TV technology that support the high-definition digital signal. In addition, the expiration of Thai benefits under the Generalized System of Preferences (GSP) also led to the slow down in TV production. Apart from the technology changes, there is a shortage of raw material (LCD Panel), necessary for production.

| | Production Index Change (%) | | |
|---|---|---|---|
| | 2005 | 2006 | 2007 |
| **Production Index of Electronic Sector** | **39.48** | **21.97** | 28.29 |
| Electric tubes Cathode For Colr TV (CRT) | -42.55 | -38.63 | -48.26 |
| Electric tubes Ray tubes for Computer & Related equipment | -11.33 | 3.30 | -10.84 |
| Semiconductor devices | -3.74 | 4.15 | 14.34 |
| Inegrated circuits (IC) Monolithic | 2.76 | 6.49 | 4.61 |
| Inegrated circuits (IC) Other IC | 10.24 | 29.03 | 23.38 |
| Hard Disk Drive | 61.5 | 27.39 | 32.91 |
| Printer | -26.32 | -51.40 | -32.25 |

*Source: Office of Industrial Economics*

Thailand's electronic industry has showed another significant role in 2007. This industry alone generated revenue to the country of nearly US$ 30 billion and accounted for 30 percent of Thailand's total export revenue. However, the total electronics components imported was also high or equal to US$ 21.99 billion, which slightly increased by 8 percent from 2006. More than 89 percent of the total electronic imported value came from the top 5 important electronic sectors. Of that imported total, 84.05 percent are raw materials (Integrated Circuit, Computer Component, Printed Circuit, and Diode/Transistor), which is primarily used in

| **Top 5 Import Electronic Sectors** | **Import Volume (US$ bn)** | | |
|---|---|---|---|
| | **2005** | **2006** | **2007** |
| **Electronic Components** | | | |
| Integrated Circuit | 8,016.10 | 8,766.44 | 10,019.51 |
| Computer Component | 5,108.13 | 5,726.20 | 6,334.45 |
| Mobile Telephone | 1,502.89 | 1,537.55 | 1,279.48 |
| Printed Circuit | 844.29 | 1,032.94 | 1,249.28 |
| Diode and Transister | 828.98 | 884.46 | 883.97 |
| **Total Top 5 Import Electronic** | **16,300.40** | **17,947.60** | **19,766.68** |
| % of Top 5 Import Electronic | 88.26 | 88.31 | 89.87 |
| **Total Import Electronic** | **18,468.64** | **20,322.47** | **21,995.53** |

*Source: Electrical and Electronics Institute*

assembling finished products or local production replacement, reflecting the expansion of global demand in consumer electronics such as personal computer, notebook, and palm.

## Market Entry

Top 10 Exports 2007

| Product | Proportion% (y-o-y) | Value (US$ bn) |
|---|---|---|
| 1. Automatic data processing machines and accessories | 11.35 | 17.31 |
| 2. Motor cars, parts and accessories | 7.90 | 12.04 |
| 3. Electronic integrated circuits | 5.28 | 8.05 |
| 4. Rubber | 3.70 | 5.64 |
| 5. Precious stones and jewellery | 3.53 | 5.38 |
| 6. Polymers of ethylene, propylene, etc | 3.42 | 5.21 |
| 7. Iron and steel and their products | 3.01 | 4.60 |
| 8. Machinery and parts thereof | 2.86 | 4.37 |
| 9. Refines fuels | 2.69 | 4.10 |
| 10. Chemical products | 2.57 | 3.92 |

*Source: Ministry of Commerce*

The electronics industry is an export-oriented sector that receives full support from the government of Thailand. As a result, foreign investors are welcome to set up their business or open a manufacturing base in Thailand. The Board of Investment (BOI) is one of the government agencies, which is responsible for promoting investment. Of the total 2007 BOI applications, foreign direct investment increased by 63 percent, while combined joint ventures and foreign direct investment registered healthy growth of 76 percent increase, reaching a record high of US$ 19.45 billion. In 2008, the BOI will focus on promoting value-added projects and more advanced technology in automotive and electronics industries as well as in knowledge-based industries such as biotechnology, RFID, LED, LCD panels and renewable energy. Strengthen competitive sectors, such as HDD, electronics and electrical products, automotive and parts. BOI expects to attract more foreign investments of approximately US$ 9 billion by 2011.

Apart from promoting the business climate, the BOI also grants special incentives to investors in the electronics sector. These incentives include: maximum tax incentives for high-technology investment projects totaling more than 30 million baht and producing products not yet made in Thailand; exemption from corporate income tax for a period of 8 years; exemption from import duties for machinery throughout the period of promotion; and exemption from import duties on raw materials and components used for producing electronic goods.

## Market Issue

More than 80 percent of electronic companies in Thailand are foreign or joint venture companies, which are responsible for assembling finished products before export. Therefore, a rise in raw material prices, a drain of workers at the operation level to other industries (such as automobile industry due to higher wages), pressure in strong price competition from other Asian countries, such as China, Taiwan, Singapore and Malaysia for low-tech components, and distribution networking, would all be major concerns for U.S. exporters. However, U.S. exporters still have the opportunity to enter into the Thai market by focusing on high-end components with higher quality products.

## Prospective Buyers

Most of the electronic components need to be imported for assembly in Thailand due to the majority of electronics entrepreneurs or sub-contracting companies are lower-tier suppliers, who mainly focus on assembling, testing electronics equipment for IC and semiconductor products in the final stage of the production process. This represents a good opportunity for U.S. suppliers to expand their market into Thailand.

Prospective buyers include:

- Electronic component assemblers and manufacturers
- Consumer electronic manufacturers
- Electronic component distributors

## Trade Events

**SUBCON Thailand 2009**
Subcontracting Exhibition of Thailand
Date: May 13-16 2009
Place: Bangkok International Trade & Exhibition Center (BITEC) Bangkok
Website: http://www.subconthailand.com

**NEPCON Thailand 2009**
Date: June 25 – 28, 2009
Place: BITEC, Bangkok Thailand
Website: http://www.nepconthailand.com

## Resources and Key Contacts

**Thailand Board of Investment (BOI)**
Head Office: 555 Vibhavadi-Rangsit Rd.,
Chatuchak, Bangkok 10900, Thailand
Tel. (66)2537-8111-55, 2537-8555,
Fax: (66)2537-8177,
Website: http://www.boi.go.th,
E-Mail: head@boi.go.th

**Electrical and Electronics Institute (EEI)**
57 Department of Industrial Works Building,
6th floor, Phrasumen Road, Banglumphu,
Phranakorn, Bangkok 10200 Thailand
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Fax: (662)280-7277
Website: http://www.thaieei.com
Email: general@thaieei.com

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**The Customs Department**
Soonthornkosa Road, Klong Toey
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Fax: 662-249-1279
Website: http://www.customs.go.th

## For More Information

The U.S. Commercial Service in Bangkok, Thailand can be contacted via e-mail at: ksetasuv@mail.doc.gov; Phone: 662-205-5282; Fax: 662-255-2915 or visit our website: http://www.buyusa.gov/thiailand/en

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